

10-289

SEARCH REQUEST FORM

CMI 2E17

Requestor's Name: PAK, JOHN

Serial Number: 08/611,764

Date: 10/14/98

Phone: 308 - 4538

Art Unit: 1616

Search Topic:

Please write a detailed statement of search topic. Describe specifically as possible the subject matter to be searched. Define any terms that may have a special meaning. Give examples or relevant citations, authors keywords, etc., if known. For sequences, please attach a copy of the sequence. You may include a copy of the broadest and/or most relevant claim(s).

Very pure (>90%) H₂SO₄* *
← NO other
Extraneous additive(s).

+

(Distilled, preferably) H₂O

+

NH₄SO₄ or Urea↓
Heat to High temp (~900°F).

↓

Final Product

Inventor's name → Barry W. Cummins.

STAFF USE ONLY

Date completed: 10/14/98

Searcher: m

Terminal time: 105

Elapsed time:

CPU time:

Total time: 12

Number of Searches: 2

Number of Databases: 3

Search Site

 STIC CM-1 Pre-S N.A. Sequence A.A. Sequence Structure

Vendors

 IG Suite STN Dialog APS Geninfo SDC DARC/Questel

=> fil reg

FILE 'REGISTRY' ENTERED AT 12:03:59 ON 15 OCT 1998
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STRUCTURE FILE UPDATES: 09 OCT 98 HIGHEST RN 212432-75-2
DICTIONARY FILE UPDATES: 14 OCT 98 HIGHEST RN 212432-75-2

TSCA INFORMATION NOW CURRENT THROUGH JUNE 29, 1998

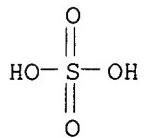
Please note that search-term pricing does apply when
conducting SmartSELECT searches.

Stereochemical name changes have been adopted and appear in CN's
beginning 6/29/98. See the online news message for details.

** Notice ** If you recently ran a CSS search involving an
AK-carbon connection, please enter NEWS
at an arrow prompt for a message containing
important details.

=> d 11 ide can

L1 ANSWER 1 OF 1 REGISTRY COPYRIGHT 1998 ACS
RN 7664-93-9 REGISTRY
CN **Sulfuric acid (8CI, 9CI)** (CA INDEX NAME)
OTHER NAMES:
CN BOV
CN Contact acid
CN Dihydrogen sulfate
CN Dipping acid
CN Oil of vitriol
CN Sulphuric acid
CN Vitriol brown oil
FS 3D CONCORD
DR 127529-01-5, 119540-51-1, 140623-70-7
MF H2 O4 S
CI COM
LC STN Files: AGRICOLA, ANABSTR, APILIT, APILIT2, APIPAT, APIPAT2,
BIOBUSINESS, BIOSIS, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT,
CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CBNB, CHEMSAFE, CIN,
CSCHEM, CSNB, DETHERM*, DDFU, DIPPR*, DRUGU, EMBASE, GMELIN*,
HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS,
NIOSHTIC, PDLCOM*, PIRA, PNI, PROMT, RTECS*, SPECINFO, TOXLINE,
TOXLIT, TRCTHERMO*, TULSA, ULIDAT, USAN, USPATFULL, VTB
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



55541 REFERENCES IN FILE CA (1967 TO DATE)
 3003 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 55610 REFERENCES IN FILE CAPLUS (1967 TO DATE)
 1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 129:210535
 REFERENCE 2: 129:210305
 REFERENCE 3: 129:209234
 REFERENCE 4: 129:209045
 REFERENCE 5: 129:208539
 REFERENCE 6: 129:208516
 REFERENCE 7: 129:208498
 REFERENCE 8: 129:208493
 REFERENCE 9: 129:208485
 REFERENCE 10: 129:208482

=> d 12 ide can

L2 ANSWER 1 OF 1 REGISTRY COPYRIGHT 1998 ACS
 RN 7732-18-5 REGISTRY
 CN Water (8CI, 9CI) (CA INDEX NAME)
 OTHER NAMES:
 CN Distilled water
 CN DRiWATER
 CN Hydrogen oxide (H₂O)
 CN R 718
 FS 3D CONCORD
 MF H₂ O
 CI COM
 LC STN Files: AIDSLINE, ANABSTR, BIOSIS, CA, CABA, CANCERLIT, CAPLUS,
 CASREACT, CHEMCATS, CHEMINFORMRX, CHEMLIST, CBNB, CHEMSAFE,
 CSCHEM, CSNB, DETHERM*, DIPPR*, EMBASE, GMELIN*, IFICDB, IFIPAT,
 IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NIOSHTIC, PDLCOM*, RTECS*,
 SPECINFO, TOXLINE, TOXLIT, TRCTHERMO*, ULIDAT, USAN, USPATFULL,
 VTB
 (*File contains numerically searchable property data)
 Other Sources: DSL**, EINECS**, TSCA**
 (**Enter CHEMLIST File for up-to-date regulatory information)

H₂O

203311 REFERENCES IN FILE CA (1967 TO DATE)
635 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
203594 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE 1: 129:211082

REFERENCE 2: 129:211021

REFERENCE 3: 129:211003

REFERENCE 4: 129:210997

REFERENCE 5: 129:210989

REFERENCE 6: 129:210977

REFERENCE 7: 129:210967

REFERENCE 8: 129:210962

REFERENCE 9: 129:210959

REFERENCE 10: 129:210947

=> d 112 ide can

L12 ANSWER 1 OF 1 REGISTRY COPYRIGHT 1998 ACS
RN 57-13-6 REGISTRY

CN Urea (8CI, 9CI) (CA INDEX NAME)

OTHER NAMES:

CN B-I-K

CN Benural 70

CN Carbamide

CN Carbamimidic acid

CN Carbonyl diamide

CN Isourea

CN Keratinamin Kowa

CN Nimin

CN Pastaron

CN Pastaron 10

CN Pastaron 20

CN Pastaron 20 soft

CN Pseudourea

CN UR

CN Urea perhydrate

CN Ureaphil

CN Ureophil

CN Urepeal

CN Urepeal L

CN Urepearl

CN Urevert

CN Varioform II

FS 3D CONCORD

DR 30535-50-3

MF C H4 N2 O

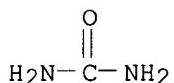
CI COM

LC STN Files: AGRICOLA, AIDSLINE, ANABSTR, APILIT, APILIT2, APIPAT,
 APIPAT2, BEILSTEIN*, BIOBUSINESS, BIOSIS, CA, CABA, CANCERLIT,
 CAOLD, CAPLUS, CASREACT, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST,
 CBNB, CIN, CSCHEM, CSNB, DETHERM*, DDFU, DIPPR*, DRUGU, EMBASE,
 GMELIN*, HODOC*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE,
 MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PDLCOM*, PIRA, PHAR, PNI,
 PROMT, RTECS*, SPECINFO, TOXLINE, TOXLIT, TRCTHERMO*, TULSA,
 ULIDAT, USAN, USPATFULL, VETU, VTB

(*File contains numerically searchable property data)

Other Sources: DSL**, EINECS**, TSCA**

(**Enter CHEMLIST File for up-to-date regulatory information)



43774 REFERENCES IN FILE CA (1967 TO DATE)
 2497 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 43810 REFERENCES IN FILE CAPLUS (1967 TO DATE)
 9 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 129:211037

REFERENCE 2: 129:207168

REFERENCE 3: 129:207107

REFERENCE 4: 129:206543

REFERENCE 5: 129:206486

REFERENCE 6: 129:204299

REFERENCE 7: 129:204259

REFERENCE 8: 129:204243

REFERENCE 9: 129:204140

REFERENCE 10: 129:203258

=> d ide can

L36 ANSWER 1 OF 1 REGISTRY COPYRIGHT 1998 ACS

RN 7783-20-2 REGISTRY

CN Sulfuric acid diammonium salt (8CI, 9CI) (CA INDEX NAME)

OTHER NAMES:

CN Ammonium sulfate

CN Ammonium sulfate ((NH4)2SO4)

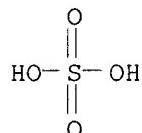
CN Ammonium sulphate

CN Coaltral LPA 40

CN Diammonium sulfate

CN Diammonium sulphate

CN Dolamin
 CN Liase
 CN Para-Go
 CN Sulfuric acid ammonium salt (1:2)
 CN Sulfuric acid, diammonium salt
 DR 64006-53-7, 82168-61-4, 44071-93-4
 MF H3 N . 1/2 H2 O4 S
 CI COM
 LC STN Files: AGRICOLA, AIDSLINE, ANABSTR, APILIT, APILIT2, APIPAT,
 APIPAT2, BIOBUSINESS, BIOSIS, CA, CABA, CANCERLIT, CAPLUS,
 CASREACT, CEN, CHEMCATS, CHEMLIST, CBNB, CIN, CSCHEM, CSNB,
 DETERM*, DDFU, DIPPR*, DRUGU, EMBASE, GMELIN*, HSDB*, IFICDB,
 IFIPAT, IFFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NIOSHTIC, PDLCOM*,
 PIRA, PNI, PROMT, RTECS*, TOXLINE, TOXLIT, TRCTHERMO*, TULSA,
 ULIDAT, USPATFULL, VETU, VTB
 (*File contains numerically searchable property data)
 Other Sources: DSL**, EINECS**, TSCA**
 (**Enter CHEMLIST File for up-to-date regulatory information)
 CRN (7664-93-9)



• 2 NH₃

12140 REFERENCES IN FILE CA (1967 TO DATE)
 88 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 12156 REFERENCES IN FILE CAPLUS (1967 TO DATE)

REFERENCE	1:	129:210789
REFERENCE	2:	129:208521
REFERENCE	3:	129:206183
REFERENCE	4:	129:204429
REFERENCE	5:	129:203889
REFERENCE	6:	129:202438
REFERENCE	7:	129:202434
REFERENCE	8:	129:202145
REFERENCE	9:	129:201821
REFERENCE	10:	129:200072

=> d his 117-134

(FILE 'REGISTRY' ENTERED AT 11:29:14 ON 15 OCT 1998)

FILE 'HCAPLUS' ENTERED AT 11:30:37 ON 15 OCT 1998

L17 55611 S L1
L18 12759 S L11
L19 43937 S L12
L20 1417 S L17 AND L18
L21 575 S L17 AND L19
L22 237 S L20,L21 AND HEAT?
L23 264 S L20,L21 AND TEMPERATURE
L24 87 S L20,L21 AND THERMAL?
L25 476 S L22-L24
L26 9359 S L1/P OR L11/P OR L12/P
L27 385 S L25 NOT L26
L28 80 S L27 AND (HIGH OR ELEVAT?)
L29 13 S L28 AND (54 OR 49 OR 70 OR 39)/SC
L30 3 S L29 AND (AMMONIOJAR? OR HYDROXYLAMINE OR REVIEW OR CARB
SEL HIT RN 1-3

FILE 'REGISTRY' ENTERED AT 12:00:35 ON 15 OCT 1998

L31 2 S E4-E5

FILE 'HCAPLUS' ENTERED AT 12:00:58 ON 15 OCT 1998

L32 3 S L28 AND (AMMONIOJAR? OR HYDROXYLAMINE OR REVIEW OR CARB
L33 1 S L28 AND REVIEW
L34 4 S L32,L33

=> fil hcaplus

FILE 'HCAPLUS' ENTERED AT 12:05:27 ON 15 OCT 1998
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FILE COVERS 1967 - 15 Oct 1998 VOL 129 ISS 16
FILE LAST UPDATED: 15 Oct 1998 (981015/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

This file supports REGISTRY for direct browsing and searching of all substance data from the REGISTRY file. Enter HELP FIRST for more information.

=> d all 134 tot

L34 ANSWER 1 OF 4 HCAPLUS COPYRIGHT 1998 ACS

AN 1995:751488 HCPLUS
 DN 123:175437
 TI Preparation and decomposition of ammoniojarosite at elevated temperatures in H₂O-(NH₄)₂SO₄-H₂SO₄ media
 AU Das, G. K.; Anand, S.; Acharya, S.; Das, R. P.
 CS Regional Research Laboratory, Council for Scientific and Industrial Research, Bhubaneswar 751 013, Orissa, India
 SO Hydrometallurgy (1995), 38(3), 263-76
 CODEN: HYDRDA; ISSN: 0304-386X
 DT Journal
 LA English
 CC 54-2 (Extractive Metallurgy)
 AB Ammoniojarosite samples were prep'd. at 368 and 483 K. The XRD patterns of these samples were identical, showing sharp peaks corresponding to d lines of reported ammoniojarosite. TG-DTA curves show that the decompn. of ammoniojarosite starts at .apprx.643 K, with complete conversion to Fe₂O₃ at .apprx.1073 K. Hydrothermal decompn. of ammoniojarosite was studied by varying H₂SO₄ concn., time, temp. and (NH₄)₂SO₄. It was obsd. that, depending on the acid concn., the jarosite was stable up to 503 K. At 523 K complete decompn. of jarosite takes place within 3 h.
 ST ammoniojarosite ammonium sulfate sulfuric acid
 IT 7664-93-9, Sulfuric acid, uses 7732-18-5, Water, uses 7783-20-2, Ammonium sulfate, uses
 RL: NUU (Nonbiological use, unclassified); USES (Uses) (prepn. and decompn. of ammoniojarosite at elevated temps. in H₂O-(NH₄)₂SO₄-H₂SO₄ media)
 IT 12194-95-5, Ammoniojarosite
 RL: PEP (Physical, engineering or chemical process); PROC (Process) (prepn. and decompn. of ammoniojarosite at elevated temps. in H₂O-(NH₄)₂SO₄-H₂SO₄ media)

L34 ANSWER 2 OF 4 HCPLUS COPYRIGHT 1998 ACS
 AN 1991:46007 HCPLUS
 DN 114:46007
 TI Manufacture of crystalline hydroxylamine sulfate having low ammonium sulfate content
 IN Fuchs, Hugo; Neubauer, Gerald; Ritz, Josef; Weiss, Franz Josef
 PA BASF A.-G., Fed. Rep. Ger.
 SO Ger. Offen., 4 pp.
 CODEN: GWXXBX
 PI DE 3916320 A1 19901122
 AI DE 89-3916320 19890519
 DT Patent
 LA German
 IC ICM C01B021-14
 ICA B01J041-14; A01N059-00
 CC 49-5 (Industrial Inorganic Chemicals)
 AB The process comprises contacting an aq. soln., which contains (NH₄)₂SO₄ 0.02-0.03 and H₂SO₄ 0.3-0.02 wt. parts/wt. part hydroxylamine sulfate (I), under stirring, with a basic ion exchanger while maintaining the pH at 3.0-4.0, sepg. the ion exchanger from the aq. soln., evapg. the soln. under reduced pressure at <100.degree., crystg. l.toreq.70 wt.% of the I from the concd. soln., and sepg. the I from the mother liquor. This process avoids corrosion problems, and increases the crystn. capacity. A soln. contg., per 254 g I, 13 g free H₂SO₄ and 18.6 g (NH₄)₂SO₄ was passed over an amino group-exchanged and NH₄OH-treated polystyrene

heat exchanger until the pH reached 3.35. The soln. was exmd. at .apprx.60.degree. under partial vacuum (190 mbar) and gave, under cooling to 20.degree., 50% of the I as crystals contg. 0.6 wt.% (NH₄)₂SO₄ vs. 1.1 wt.% by prior art method.

ST hydroxylamine sulfate crystn ion exchanger; sulfuric acid removal hydroxylamine sulfate; ammonium sulfate removal hydroxylamine sulfate; basic ion exchanger hydroxylamine sulfate

IT Ion exchangers

(basic, ammonium sulfate and sulfuric acid removal by, for hydroxylamine sulfate crystn.)

IT 10039-54-0, Hydroxylamine sulfate

RL: USES (Uses)

(crystn. of, from aq. solns., ion exchange with basic ion exchanger in, for low ammonium sulfate and sulfuric acid content)

IT 7664-93-9, Sulfuric acid, uses and miscellaneous

7783-20-2, Ammonium sulfate, uses and miscellaneous

RL: REM (Removal or disposal); PROC (Process)

(removal of, from hydroxylamine sulfate solns., with basic ion exchanger, for **high-purity** product crystn.)

L34 ANSWER 3 OF 4 HCPLUS COPYRIGHT 1998 ACS
AN 1978:481851 HCPLUS

DN 89:81851

TI Anodic oxidation of aluminum using an automatically controlled **high-temperature** bath of the sulfuric acid-ammonium sulfate system. I

AU Tajima, Hisashi

CS Dep. Technol., Tokyo Metrop. Univ., Tokyo, Japan

SO Kinki Aruminyumu Hyomen Shori Kenyukai Kaishi (1975), 53, 48-53
CODEN: KAHKA7

DT Journal; General Review

LA Japanese

CC 72-0 (Electrochemistry)

AB A review with 6 refs.

ST **review** aluminum anodization **high temp**; ammonium sulfate anodization aluminum **review**

IT Anodization

(of aluminum, in automatically controlled **high-temp.** sulfuric acid-ammonium sulfate bath)

IT 7783-20-2, uses and miscellaneous

RL: USES (Uses)

(anodization of aluminum in automatically controlled **high-temp.** acid bath of)

IT 7664-93-9, uses and miscellaneous

RL: USES (Uses)

(anodization of aluminum in automatically controlled **high-temp.** ammonium sulfate bath with)

IT 7429-90-5, uses and miscellaneous

RL: RCT (Reactant)

(anodization of, in automatically controlled **high-temp.** sulfuric acid-ammonium sulfate bath)

L34 ANSWER 4 OF 4 HCPLUS COPYRIGHT 1998 ACS

AN 1970:426504 HCPLUS

DN 73:26504

TI Carbonizing of cellulose fibers

IN Miyamichi, Kazuo

PA Nitto Boseki Co., Ltd.

SO Ger. Offen., 61 pp.
 CODEN: GWXXBX
 PI DE 1955474 19700514
 PRAI JP 19681106 - 19690919
 DT Patent
 LA German
 IC C01B
 CC 39 (Textiles)
 AB Cellulose fibers are treated with a strength improver and then carbonized by heating at 200-350.degree. in an oxidizing atm. and at .apprx.1000.degree. in an inert atm. The strength improver consists of (NH₄)₂SO₃, (NH₄)HSO₃, (NH₄)HSO₄, or (NH₄)₂S₂O₃, a mixt. of 1 or more of the compds. (NH₄)₂SO₄, (NH₄)HSO₄, (NH₄)₂SO₃, (NH₄)HSO₃, (NH₄)₂S₂O₂, H₂NSO₃NH₄, or ammonium imidosulfonate and .gt;req.1 nitrogeneous base, or a mixt. of H₂SO₄, H₂SO₃, or H₂NSO₃H and .gt;req.1 nitrogeneous base. The strength-improving treatment can be combined with a flame-retardant treatment. This process gives C or graphite fibers of improved strength and flexibility, and provides a com. method in which destruction of the cellulose by pyrolysis during heat-treating is reduced and which is operative at high heating rates.
 ST carbonizing cellulose fibers; cellulose fibers carbonizing; fibers cellulose carbonizing; graphite fibers; ammonium salts fiber treatment; sulfur oxyacid salts fiber treatment
 IT Fiber, synthetic
 RL: USES (Uses)
 (carbon, from rayon strengthened by ammonium salts combined with fireproofing phosphorus compds.)
 IT Fireproofing
 (of rayon strengthened by ammonium salts with phosphorus compds. for carbon fiber manuf.)
 IT Phosphorus
 RL: USES (Uses)
 (fireproofing by, of rayon strengthened by sulfur compds. for carbon fiber manuf.)
 IT 7440-44-0P, preparation 7782-42-5P, preparation
 RL: PREP (Preparation)
 (fibers, from rayon strengthened by ammonium salts)
 IT 7783-18-8
 RL: USES (Uses)
 (rayon fiber strengthening by, for carbon fiber manuf.)
 IT 5329-14-6 7664-93-9, uses and miscellaneous 7782-99-2, uses and miscellaneous 7783-20-2, uses and miscellaneous 10196-04-0
 RL: USES (Uses)
 (rayon treatment with strengthening, for carbon fiber manuf.)

=> fil wpids

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FILE LAST UPDATED: 14 OCT 1998 <19981014/UP>
 >>>UPDATE WEEKS:
 MOST RECENT DERWENT WEEK 199841 <199841/DW>
 DERWENT WEEK FOR CHEMICAL CODING: 199836
 DERWENT WEEK FOR POLYMER INDEXING: 199838
 DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE

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=> d his 137-

(FILE 'HCAPLUS' ENTERED AT 12:05:27 ON 15 OCT 1998)

FILE 'WPIDS' ENTERED AT 12:06:06 ON 15 OCT 1998

	E SULFURIC ACID/DCN
L37	E E3+ALL/DCN
L38	2078 S R01714/DCN
	6784 S (C101(P)C108(P)C316(P)C540(P)C730(P)C800(P)C801(P)C802(
	E AMMONIUM SULFATE/DCN
L39	E E3+ALL/DCN
	3056 S R01786/DCN OR 1786/DRN
L40	18969 S L37 OR L38 OR 1714/DRN
L41	52300 S (SULFURIC OR SULPHURIC) ()ACID OR H ₂ SO ₄ OR H ₂ SO ₄
L42	58426 S L40,L41
L43	4465 S (C108(P)C316(P)C500(P)C540(P)C730(P)C801(P)C802(P)C804(
L44	9886 S AMMONIUM () (SULFATE OR SULPHATE) OR NH ₄ SO ₄ OR NH ₄ 2S04
	E UREA/DCN
	E E3+ALL/DCN
L45	40230 S R00123/DCN OR 0123/DRN OR UREA
L46	766 SEA ("L432"(P)M280(P)M320(P)M416(P)M424(P)M620)/M0,M1,M2, M3,M4,M5,M6
L47	40412 S L45,L46
L48	1667 S L42 AND L44
L49	26 S L42 AND L46
L50	1683 S L48,L49
L51	71 SEA L50 AND (N514 OR N515)/M0,M1,M2,M3,M4,M5,M6
L52	5 SEA L51 AND R023/M0,M1,M2,M3,M4,M5,M6
L53	28 S L51 AND (WATER OR H ₂ O)
L54	1 S L51 AND (R01740/DCN OR 1740/DRN)
L55	20 S L51 AND AQUEOUS
L56	12 S L51 AND LIQUID
L57	47 S L52-L56
L58	1 S L57 AND STEAM/TI
L59	2 S L57 AND STREAM/TI
L60	1 S L59 AND APPTS/TI

FILE 'WPIDS' ENTERED AT 12:32:15 ON 15 OCT 1998

=> d all kwic 160

L60	ANSWER 1 OF 1 WPIDS COPYRIGHT 1998 DERWENT INFORMATION LTD
AN	86-041483 [06] WPIDS
DNN	N86-030306 DNC C86-017666
TI	Acid cpd. prodn. appts. - where ammonia and then sulphuric acid are injected into an aq. stream.
DC	E37 J04 Q78
IN	SORBER, K H
PA	(SORC-N) SORCO CORP
CYC	1
PI	US 4564504 A · 860114 (8606)* 7 pp

ADT US 4564504 A US 83-556091 831129

PRAI US 83-556091 831129

IC B01J014-00; B01J019-02; C01C001-24; F28D007-00

AB US 4564504 A UPAB: 930922

An acid cpd. formed by the reaction of ammonia and **sulphuric acid** in an **aq.** medium at high temps. and pressures, is produced in appts. which comprises a pair of reactors arranged in series for injecting the ammonia and then the **sulphuric acid** into a stream of the **aq.** medium.

USE/ADVANTAGE - The appts. can withstand the temps. and pressures during the reaction sequence, and also the corrosive attack of the ammonia and **sulphuric acid**. The acid cpd. can be used as a metal cleaner, electrolyte, etching agent, plating media or soil enhancer.

0/10

FS CPI GMPI

FA AB

MC CPI: E32-A03; J04-X

DRN 1713-S; 1714-S

M3 *01* C101 C107 C108 C316 C500 C520
 C540 C730 C800 C801
 C802 C804 M411 M417 M424 M720
 M740 M903 N513 N514 N515 N521 N522 N523
 N524 Q461 Q463-Q465

TT TT: ACID COMPOUND PRODUCE APPARATUS AMMONIA **SULPHURIC ACID INJECTION AQUEOUS STREAM.**

$N_{<13} = >30 - 200^{\circ}\text{C}$

$N_{514} = >200 - 500^{\circ}\text{C}$

$N_{515} = >500^{\circ}\text{C}$

$N_{521} = 1 - 2$

$N_{522} = 2 - 20 \text{ Atm.}$
 (pressure)

$N_{<23} = >2 - 100 \text{ atm.}$

$N_{524} = >100 - 1000$

=> d all 7 13

L48 ANSWER 7 OF 41 HCAPLUS COPYRIGHT 1998 ACS
AN 1993:455362 HCAPLUS
DN 119:55362
TI Disposal of acidic petroleum refining residues
IN Dimun, Milan; Lazar, Lubomir; Zeman, Svatopluk; Lipka, Radislav;
Kellner, Michal; Kabatova, Viera; Truchlik, Stefan
PA Czech.
SO Czech., 3 pp.
CODEN: CZXXA9
PI CS 273073 B1 19920330
AI CS 88-5581 19880812
DT Patent
LA Slovak
IC ICM C10G017-06
CC 60-5 (Waste Treatment and Disposal)
Section cross-reference(s): 19, 37, 51, 57
AB During disposal, acid petroleum refining residues contg.
H₂SO₄ 15-70, sulfoacids 5-50, oil 10-60, and **water**
5-30 wt.% are used as a catalyst and constructed with **urea**,
dicyandiamide, guanidine, semicarbazide, thiourea, and/or melamine
and C1-3-aldehydes (esp. formaldehyde or glyoxal) or **urea**-
formaldehyde or phenol-formaldehyde resin. The resulting product
is useful in manuf. of fertilizers, composite thermal insulators,
and carbonaceous materials. Thus, petroleum refining residue contg.
H₂SO₄ 37.9, sulfo acids 25.8, mineral oil 24.3, and
water 12 wt. % was contacted with a reaction. for mixt. of
38% formaldehyde and **urea** to give a solid product which
was ground and used in manufg. of slow-release N fertilizers.
ST petroleum refining residue disposal; fertilizer manufg petroleum
refining residue; thermal insulator petroleum refining residue;
carbonaceous material petroleum refining residue
IT Petroleum refining residues
(disposal of acidic, by using as catalysts in polymer prepn.)
IT Thermal insulators
(manufg. of, use of petroleum refining residues in)
IT Aminoplasts
Carbonaceous materials
Fertilizers
Phenolic resins, preparation
Polymers, preparation
RL: PREP (Preparation)
(manufg. of, use of petroleum refining residues in)
IT 57-13-6P, **Urea**, preparation 9003-35-4P,
Formaldehyde-phenol copolymer 9011-05-6P, Formaldehyde-
urea copolymer 53037-34-6P, Glyoxal-**urea**
copolymer
RL: PREP (Preparation)
(manufg. of, use of petroleum refining residues in)

L48 ANSWER 13 OF 41 HCAPLUS COPYRIGHT 1998 ACS
AN 1987:578731 HCAPLUS
DN 107:178731
TI Methods for removing obstructions from conduits with **urea-sulfuric acid** compositions
IN Young, Donald C.

PA Union Oil Co. of California , USA
SO U.S., 6 pp. Cont.-in-part of U.S. Ser. No. 453,496.
CODEN: USXXAM
PI US 4673522 A 19870616
AI US 84-675774 19841128
PRAI US 81-318629 19811105
US 82-453496 19821227
DT Patent
LA English
IC ICM B08B003-08
ICS C11D007-08; C11D007-32; C23G003-04
NCL 252087000
CC 46-6 (Surface Active Agents and Detergents)
Section cross-reference(s): 61
AB A **urea-H₂SO₄** compn. contg. <2 mol **urea** /mol **H₂SO₄** is useful for removing obstructions from conduits such as sink drain traps and heat exchanger tubes. A compn. contg. **water** and having **H₂O/(urea + H₂SO₄)** molar ratio <2.5 is esp. useful for removing obstructions by hydrolysis. A sink drain trap plugged with hair and hard **water** salt was unplugged by adding 400 g soln. of **urea** and **H₂SO₄**, having **urea/H₂SO₄** molar ratio 1 and **H₂O/(urea + H₂SO₄)** molar ratio 2, which contained 5% T-MULZ 891.
ST **urea sulfuric acid** cleaner; drain cleaner **sulfuric urea**; pipe cleaner **sulfuric urea**; scale remover **sulfuric urea**; heat exchanger pipe cleaner
IT Heat-exchange apparatus
(cleaning of pipes in, **sulfuric acid-urea** compns. for)
IT Scale (coating)
(removal of, from pipes, **sulfuric acid-urea** compns. for)
IT Detergents
(cleaning compns., **sulfuric acid-urea**, for drains and heat exchangers)
IT 57-13-6, **Urea**, uses and miscellaneous
RL: USES (Uses)
(cleaners contg. **sulfuric acid** and, for drains and heat exchangers)
IT 7664-93-9, **Sulfuric acid**, uses and miscellaneous
RL: USES (Uses)
(cleaners contg. **urea** and, for drains and heat exchangers)